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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/635,280	08/09/2000	RAINER H. WISCHINSKI	SAA-34-2	4936

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SQUARE D COMPANY
INTELLECTUAL PROPERTY DEPARTMENT
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EXAMINER

LAZARO, DAVID R

ART UNIT	PAPER NUMBER
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2155

DATE MAILED: 08/21/2003

2

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/635,280

Applicant(s)

WISCHINSKI, RAINER H.

Examiner

David Lazaro

Art Unit

2155

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 August 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 August 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claims 1-23 are pending in this office action.

Continuation-in-part Application

The applicant is asked to provide the continuation-in-part application number noted on page 1 in the description referenced under attorney docket SAA-34-1.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
2. Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Claim 6 recites the limitation "the server" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 2155

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 1,2, 4 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Graber et al., U.S. Patent 5,162,986 (Graber).

6. With respect to Claim 1, Graber teaches a control system (Col. 5 lines 61-65) comprising an automation device operably connected to a network (Col. 5 lines 61-65), a network device operably connected to the network (Col. 5 lines 61-65), and an application program stored in the network device (Col. 6 lines 6-8), wherein the application program controls the automation device (Col. 2 lines 8-12). It is inherent that the application program is selected in response to an application program request message sent from the automation device since the request sent from the automation device to the network device contains information identifying the application program (Col. 19 lines 57-58) and information determining if the download should occur (Col. 19 line 59 and Col. 20 line 9-11). Thus if the information determines the download should

occur, the application program noted in the message is selected and downloaded (Col. 19 line 64 to Col. 20 line 3).

7. With respect to Claim 2, Graber teaches all the limitations of Claim 1 and further teaches the application program comprises an executive code and a user code (Col. 2 line 64 to Col 3 line 2).

8. With respect to Claim 4, Graber teaches all the limitations of Claim 1 and further teaches the automation device is a programmable logic controller (Col. 4 line 39).

9. With respect to Claim 5, Graber teaches all the limitations of Claim 1 and further teaches the network device is a server (Col. 4 lines 13-17).

10. Claims 12, 13 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Graber.

11. With respect to Claim 12, Graber teaches a method of operating a control system on a network (Col. 5 lines 61-65) comprising the steps of providing a network device for storing an application program to be executed on an automation device (Col. 6 lines 6-8), transmitting a message for requesting the application program from the network device (Col. 6 lines 29-32), transmitting the application program to the automation device (Col. 20 lines 1-4), and installing the application program on the automation device (Col. 20 lines 41-45). It is inherent that the application program is selected in response to an application program request message sent from the automation device since the request sent from the automation device to the network device contains information identifying the application program (Col. 19 lines 57-58) and information

determining if the download should occur (Col. 19 line 59 and Col. 20 line 9-11). Thus if the information determines the download should occur, the application program noted in the message is selected and downloaded (Col. 19 line 64 to Col. 20 line 3).

12.

13. With respect to Claim 13, Graber teaches all the limitations of Claim 12 and further teaches the step of executing the application program on the automation device (Col. 20 lines 44-45).

14. With respect to Claim 15, Graber teaches all the limitations of Claim 12 and further teaches an executive and user program code for the automation device (Col. 2 line 64 to Col. 3 line 2), and the user program is selected in response to the message requesting the application program (Col. 19 line 64 – Col. 20 line 13).

15. Claims 17, 19 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Graber.

16. With respect to Claim 17, Graber teaches a network control system (Col. 5 lines 61-65) comprising means for operably connecting a network device to the network control system (Col. 5 lines 61-65), the network device stores an application program for controlling an automation device (Col. 6 lines 6-8), means for transmitting a message requesting the application program (Col. 6 lines 30-32), means for transmitting the application program to the automation device (Col. 20 lines 1-4), and means for installing the application program (Col. 20 lines 41-45). It is inherent that there is means for the application program to be selected in response to the message requesting the

application program since the request sent from the automation device to the network device contains information identifying the application program (Col. 19 lines 57-58) and information determining if the download should occur (Col. 19 line 59 and Col. 20 line 9-11). Thus if the information determines the download should occur, the application program noted in the message is selected and downloaded (Col. 19 line 64 to Col. 20 line 3).

17.

18. With respect to Claim 19, Graber teaches all the limitations of Claim 17 and further teaches the automation device is a controller (Col. 4 line 39).

19. With respect to Claim 20, Graber teaches all the limitations of Claim 17 and further teaches the network device is a server (Col. 4 lines 13-17).

20. Claim 21 is rejected under 35 U.S.C. 102(b) as being anticipated by Graber. Graber teaches a method of operating a network control system on a network (Col. 5 lines 61-65) comprising the steps requesting the application program for the automation device (Col. 6 lines 29-32), transmitting the application program to the automation device (Col. 20 lines 1-4), and installing the application program on the automation device (Col. 20 lines 41-45). It is inherent that the application program is selected in response to an application program request message sent from the automation device since the request sent from the automation device to the network device contains information identifying the application program (Col. 19 lines 57-58) and information determining if the download should occur (Col. 19 line 59 and Col. 20 line 9-11). Thus if

the information determines the download should occur, the application program noted in the message is selected and downloaded (Col. 19 line 64 to Col. 20 line 3).

21. Claims 1,2 and 4-7 are rejected under 35 U.S.C. 102(e) as being anticipated by Stripf et al., U.S. Patent 6,263,487 (Stripf).

22. With respect to Claim 1, Stripf teaches a control system (Col. 2 lines 65-67) comprising an automation device operably connected to a network (Col. 2 lines 3-9), a network device operably connected to the network (Col. 2 lines 3-9), and an application program stored in the network device (Col. 3 lines 4-7), wherein the application program controls the automation device (Col. 3 lines 57-59). It is inherent in Stripf that the application program is selected in response to an application program request message sent from the automation device because when a program is to be modified there is a message sent from the automation device (Col. 3 lines 13-16). Based on the information contained in this message, the program is selected, modified, and transmitted (Col. 3 lines 16-18).

23. With respect to Claim 2, Stripf teaches all the limitations of Claim 1 and further teaches the application program comprises an executive code and a user code (Col. 4 lines 6-9).

24. With respect to Claim 4, Stripf teaches all the limitations of Claim 1 and further teaches the automation device is a programmable logic controller (See Fig. 1).

25. With respect to Claim 5, Stripf teaches all the limitations of Claim 1 and further teaches the network device is a server (See Fig. 1).

26. With respect to Claim 6, Stripft teaches all the limitations of claim 4 and further teaches the server has a TCP/IP protocol (Col. 2 lines 7-9).

27. With respect to Claim 7, Stripft teaches all the limitations of Claim 1 and further teaches the network is Internet (Col. 1, lines 65-67).

28. Claims 12, 13, 15 and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Stripf.

29. With respect to Claim 12, Stripft teaches a method of operating a control system on a network (Col. 2 lines 65-67) comprising the steps of providing a network device for storing an application program to be executed on an automation device (Col. 3 lines 4-7), transmitting a message for requesting the application program from the network device (Col. 3 lines 13-15), transmitting the application program to the automation device (Col. 3 lines 15-18), and installing the application program on the automation device (Col. 3 lines 57-59). It is inherent in Stripf that the application program is selected in response to an application program request message sent from the automation device because when a program is to be modified there is a message sent from the automation device (Col. 3 lines 13-16). Based on the information contained in this message, the program is selected, modified, and transmitted (Col. 3 lines 16-18).

30. With respect to Claim 13, Stripf teaches all the limitations of Claim 12 and further teaches the step of executing the application program on the automation device (Col. 3 lines 57-59).

31. With respect to Claim 15, Stripf teaches all the limitations of Claim 12 and further teaches an executive and user program code for the automation device (Col. 4 lines 6-9), and the user program is selected in response to the message requesting the application program (Col. 3 lines 15-18).

32. With respect to Claim 16, Stripf teaches all the limitations of Claim 15 and further teaches the executive program code is customized in response to the message requesting the application program to meet the minimum requirements for executing the application program (Col. 3 lines 15-18 and Col. 4 lines 17-20).

33. Claims 17-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Stripf.

34. With respect to Claim 17, Stripf teaches a network control system (Col. 2 lines 65-67) comprising means for operably connecting a network device to the network control system (Col. 2 lines 3-9), the network device stores an application program for controlling an automation device (Col. 3 lines 4-7), means for transmitting a message requesting the application program (Col. 3 lines 13-15), means for transmitting the application program to the automation device (Col. 3 lines 15-18), and means for installing the application program (Col. 3 lines 57-59).). It is inherent that there is means for the application program to be selected in response to the message requesting the application program because when a program is to be modified there is a message sent from the automation device (Col. 3 lines 13-16). Based on the information contained in this message, the program is selected, modified, and transmitted (Col. 3 lines 16-18).

35. With respect to Claim 18, Stripf teaches all the limitations of Claim 17 and further teaches the means for customizing the application program to meet the minimum requirements for executing the application program (Col. 3 lines 15-18 and Col. 4 lines 17-20).

36. With respect to Claim 19, Stripf teaches all the limitations of Claim 17 and further teaches the automation device is a controller (See Fig.1 ref#6).

37. With respect to Claim 20, Stripf teaches all the limitations of Claim 17 and further teaches the network device is a server (See Fig. 1).

38. Claims 21 and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Stripf.

39. With respect to Claim 21, Stripf teaches a method of operating a network control system on a network (Col. 2 lines 65-67) comprising the steps requesting the application program for the automation device (Col. 3 lines 13-15), transmitting the application program to the automation device (Col. 3 lines 15-18), and installing the application program on the automation device (Col. 3 lines 57-59). It is inherent in Stripf that the application program is selected in response to an application program request message sent from the automation device because when a program is to be modified there is a message sent from the automation device (Col. 3 lines 13-16). Based on the information contained in this message, the program is selected, modified, and transmitted (Col. 3 lines 16-18).

40. With respect to Claim 22, Stripf teaches all the limitations of Claim 21 and further teaches customizing the application program to meet the minimum requirements for executing the application program (Col. 3 lines 15-18 and Col. 4 lines 17-20).

Claim Rejections - 35 USC § 103

41. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

42. Claims 3, 14, and 23 rejected under 35 U.S.C. 103(a) as being unpatentable over Stripf.

43. With respect to Claim 3, Stripf teaches all the limitations of Claim 2. Stripf does not explicitly detail selection of the executive code in response to the user code selected. However, Stripf does teach that the application program is modified or supplemented based on a request (Col. 3 lines 17-18). Since the application is separated into code components (Col. 4 lines 6-9), it is implicit in Stripf that one code section can effect the selection of another code section. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the control system disclosed by Stripf select the executive code in response to the user code selected based on a request. This would allow the application program to be modified in separate code sections. One would be motivated to have this since it would allow the

programming unit to program according to the requirements of the specific control objective to be achieved (Col. 4 lines 17-20).

44. With respect to Claim 14, Stripf teaches all the limitations of Claim 12 and further teaches identifying the message for requesting the application program (Col. 3 lines 13-15) and selecting a user application program in response to the message (Col. 3 lines 15-18). However, Stripf does teach that the application program is modified or supplemented based on a request (Col. 3 lines 17-18). Since the application is separated into code components (Col. 4 lines 6-9), it is implicit in Stripf that one code section can effect the selection of another code section. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the control system disclosed by Stripf select the executive code in response to the user code selected based on a request for the same reason and motivation stated above in Claim 3.

45. With respect to Claim 23, Stripf teaches all the limitations of Claim 22. Stripf does not explicitly detail selection of the executive code in response to the user code selected. However, Stripf does teach that the application program is modified or supplemented based on a request (Col. 3 lines 17-18). Since the application is separated into code components (Col. 4 lines 6-9), it is implicit in Stripf that one code section can effect the selection of another code section. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the control system disclosed by Stripf select the executive code in response to the user code selected based on a request. It would have been obvious to one of ordinary skill in the

art at the time the invention was made to have the control system disclosed by Stripf select the executive code in response to the user code selected based on a request for the same reason and motivation stated above in Claim 3.

46. Claims 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Graber in view of Deegan et al., U.S. Patent 6,055,632 (Deegan). Graber teaches all the limitations of Claim 1.

47. With respect to Claim 8, Graber does not teach the network is Ethernet. Deegan teaches the use of an Ethernet network for downloading software to programmable controllers. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the control system as disclosed by Graber use an Ethernet network as indicated by Deegan since Ethernet provides high speed (Col. 5 lines 54-55 of Deegan). One would be motivated to have this since software can be upgraded more quickly.

48. With respect to Claim 9, Graber does not teach the network is Profibus. Deegan teaches the use of an Ethernet network for downloading software to programmable controllers. Deegan suggests that other types of networks could be used although Ethernet is preferred (Col. 5 lines 54-55). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the control system as disclosed by Graber use a Profibus network as indicated by Deegan. Profibus provides an automation system with protocol based on international standards. One would be

motivated to use Profibus since this would allow communications between devices that follow those standards.

49. With respect to Claim 10, Graber does not teach the network is ControlNet. . Deegan teaches the use of an Ethernet network for downloading software to programmable controllers. Deegan suggests that other types of networks could be used although Ethernet is preferred (Col. 5 lines 54-55). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the control system as disclosed by Graber use a ControlNet network as indicated by Deegan. ControlNet offers multiple controllers controlling I/O on the same link. One would be motivated to have this since other networks only allow one master controller on the link.

50. With respect to Claim 11, Graber does not teach the network is Modbus+. Deegan suggests that other types of networks could be used although Ethernet is preferred (Col. 5 lines 54-55). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the control system as disclosed by Graber use a Modbus+ network as indicated by Deegan. Modbus+ is a standard protocol in the automation industry. One would be motivated to use Modbus+ since many industry supplies implement Modbus+ protocol.

Conclusion

51. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

52. Akiyama, U.S. Patent 5,012,402 "System for modifying a machine's program at a remote location" April 30, 1991

53. Onarheim et al., U.S. Patent 5,168,441 "Method for set up and programming of machine process controllers" December 1, 1992

54. Sadre et al., U.S. Patent 5,485,620 "Integrated control system for industrial automation applications" January 16, 1996

55. Suda et al., U.S. Patent 5,752,033 "Programming device for programmable controller and method of inputting memory display for programming device" May 12, 1998

56. Green, U.S. Patent 6,247,168 "Embedded Non-Volatile Programming Tool" June 12, 2001

57. Wirtz, II et al., U.S. Patent 6,414,871 "Systems and methods for programming programmable devices" July 2, 2002.

Art Unit: 2155


Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Lazaro whose telephone number is (703) 305-4868. The examiner can normally be reached on 8:30-5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain Alam can be reached on (703) 308 - 6662. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.



David Lazaro
August 14, 2003


HOSAIN T. ALAM
PRIMARY EXAMINER